

WHAT IS CLAIMED IS:

1. - System for in-situ control of the orientation of a vehicle headlamp equipped with a light source fixed on a mobile reflector, which includes a camera mounted
5 in the vehicle, an image processing unit connected to the camera, and a specific light point emission device.
2. - Control system according to claim 1, wherein the specific light point emission device is mounted on the reflector.
3. - Control system according to claim 1, wherein the specific light point
10 emission device is a laser beam source.
4. - Control system according to claim 1, wherein the specific light point emission device is an infrared diode or a VC SEL diode.
5. - Control system according to claim 1, wherein the camera is an infrared camera.
- 15 6. - Process for in-situ control of the orientation of a vehicle headlamp, which includes the following operations :
 - recording of images of a road scene extending in front of the vehicle,
 - processing of at least one image of the road scene and production of a processed image,
 - 20 - determination, from this processed image, of a horizon line of the road scene,
 - determination of a specific point in the road scene located at a pre-defined distance from the horizon line,
 - adjustment of the orientation of the headlamp until a point of light emitted by the headlamp coincides with this specific point.

7. - Control process according to claim 6, wherein the light point emitted by the headlamp is different from a light beam illuminating the road scene.

8. - Control process according to claim 6, wherein the image processing operation involves processing at least two images in order to produce a
5 processed image.

9. - Control process according to claim 8, wherein the two-image processing operation involves subtracting one image from the other.

10. - Control process according to claim 9, wherein the two-image processing operation involves the performance of a thresholding operation on the image
10 obtained after subtraction.

11. - Control process according to claim 6, wherein the operation to determine a horizon line involves determining perspective lines in the processed image and deriving the horizon line from these.

12. - Control process according to claim 6, wherein the pre-defined distance is
15 constant.

13. - Control process according to claim 6, wherein the pre-defined distance corresponds to a number of frame lines of the camera.

14. - Control process according to claim 6, wherein the horizon line is extrapolated in relation to the perspective lines and the dimensions of the light
20 point.

15 - Vehicle headlamp including a mobile reflector actuated by a motor, and a light source fixed on the reflector, wherein in-situ orientation of the headlamp is controlled by the control system according to claim 1.